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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/216.214 12/18/98 HAVEMANN

R TI-21570

JACQUELINE J GARNER  
TEXAS INSTRUMENTS  
P O BOX 655474 M S 3999  
DALLAS TX 75265

MM12/0107

EXAMINER

TRAN.T

ART UNIT

PAPER NUMBER

2811

DATE MAILED:  
01/07/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/216,214

Applicant(s)

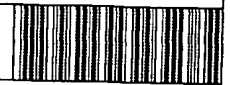
Havemann

Examiner

Thien Tran

Group Art Unit

2811



☐ Responsive to communication(s) filed on \_\_\_\_\_

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

- ☒ Claim(s) 3-9 is/are pending in the application.
- Of the above, claim(s) 3-7 is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 8 and 9 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (US 5,841,174) in view of Watabe et al. (US 4,727,038).

Arai discloses a transistor gate structure (Figs. 5C, 3A) comprising a semiconductor region 301; a dielectric 307 formed over the semiconductor region; a patterned gate 308 over the dielectric, the patterned gate having sidewalls wherein the dielectric 307 has thicker portions in proximity to the sidewalls of the gate than under central region of the gate (Fig. 3A). Arai does not disclose metal silicide conductive spacers on the sidewalls of the gate 308. Watabe et al. discloses a transistor gate structure (Figs. 7A-7D) comprising metal silicide conductive spacers 52 on the sidewalls of the gate 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate metal silicide conductive spacers taught by Watabe et al. onto the sidewalls of the gate 308 of Arai in order to derive a portion of hot carriers

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through the gate electrode, and therefore the MOS transistor device whose transconductance is not degraded by hot carrier injection is obtained.

The process limitations (the method forming a transistor structure, forming etc.) in claims 8-9 do not carry weight in claims drawn to structure. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985). In addition, a “product by process” claim directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See In re Fessman, 180 USPQ 324, 326 (CCPA 1974); and In re Marosi et al., 218 USPQ 289, 292 (Fed. Cir. 1983), all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process steps, which must be determined in a “product by process” claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

The modified Arai has the same structure as claimed. Therefore, it is inherent that the device provides a gate structure with enhanced conductivity.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 8-9 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. **Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.**

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Thien Tran* whose telephone number is (703) 308-4108. The

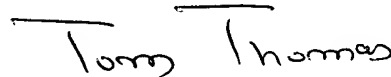
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Examiner is in the Office generally between the hours of 7:00AM to 5:30PM (Eastern Standard Time) Monday through Thursday.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is **308-0956**.

A handwritten signature in black ink that reads "Tom Thomas". The signature is written in a cursive style with a horizontal line above the first "T" and another horizontal line above the second "T".

**TOM THOMAS**  
**SUPERVISORY PATENT EXAMINER**

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January 4, 2000